Nov. 20, 1923. 1,474,936

W. B. LAWRENCE

DIRECTIONAL SIGNAL

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Fig. 1.

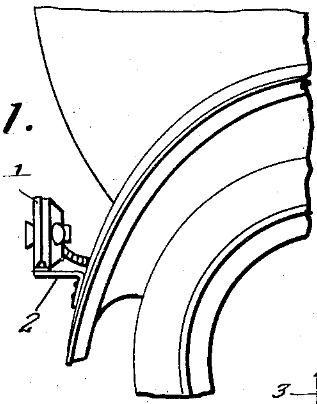


Fig. 3.

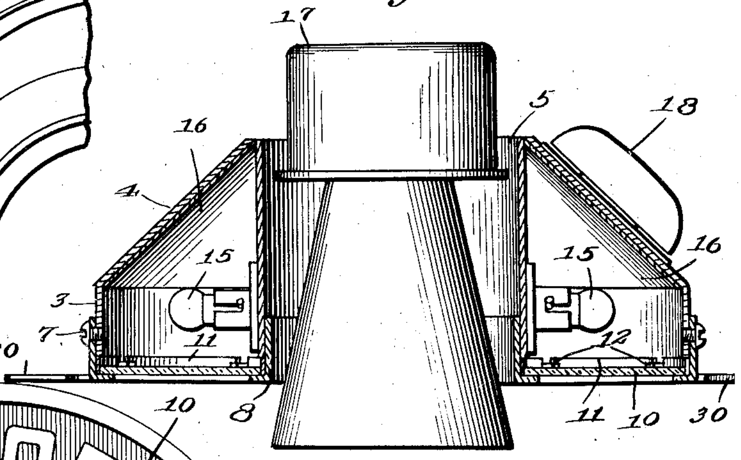
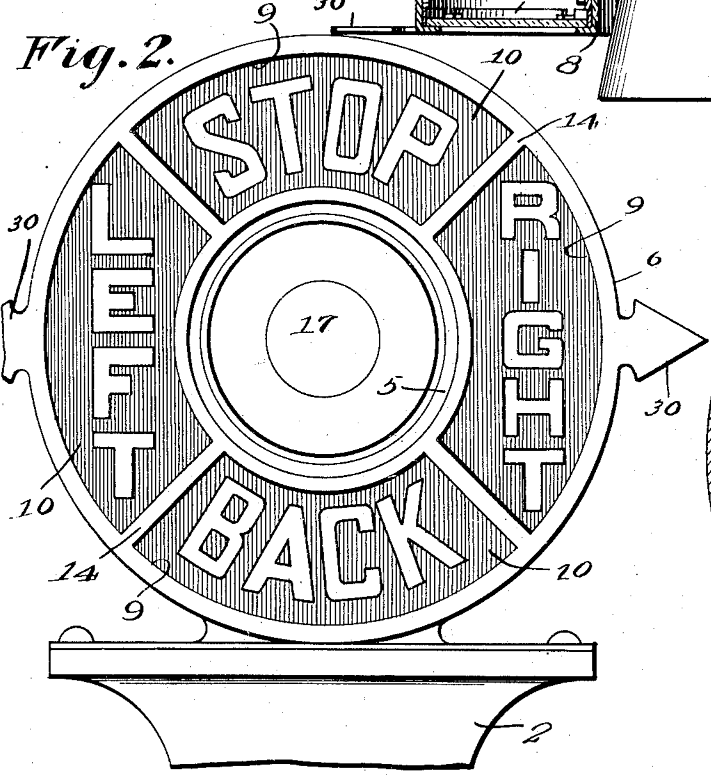


Fig. 2.



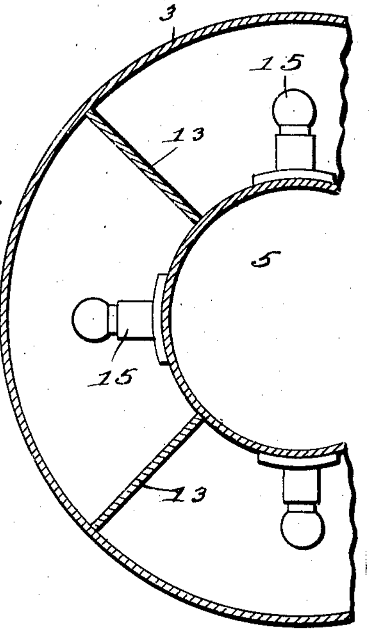


Fig. 4.

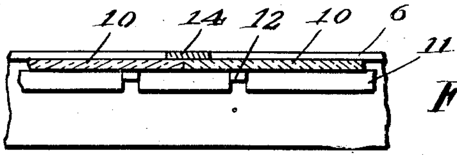


Fig. 5.

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DIRECTIONAL SIGNAL

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Fig. 6.

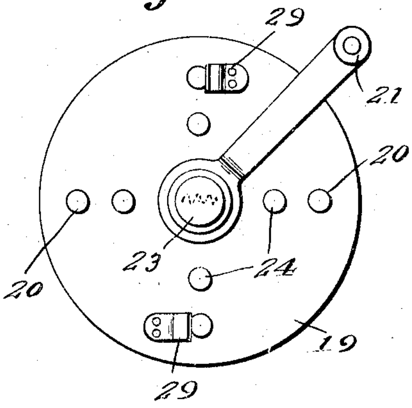
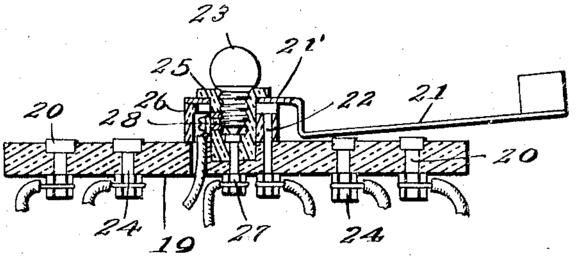


Fig. 7.



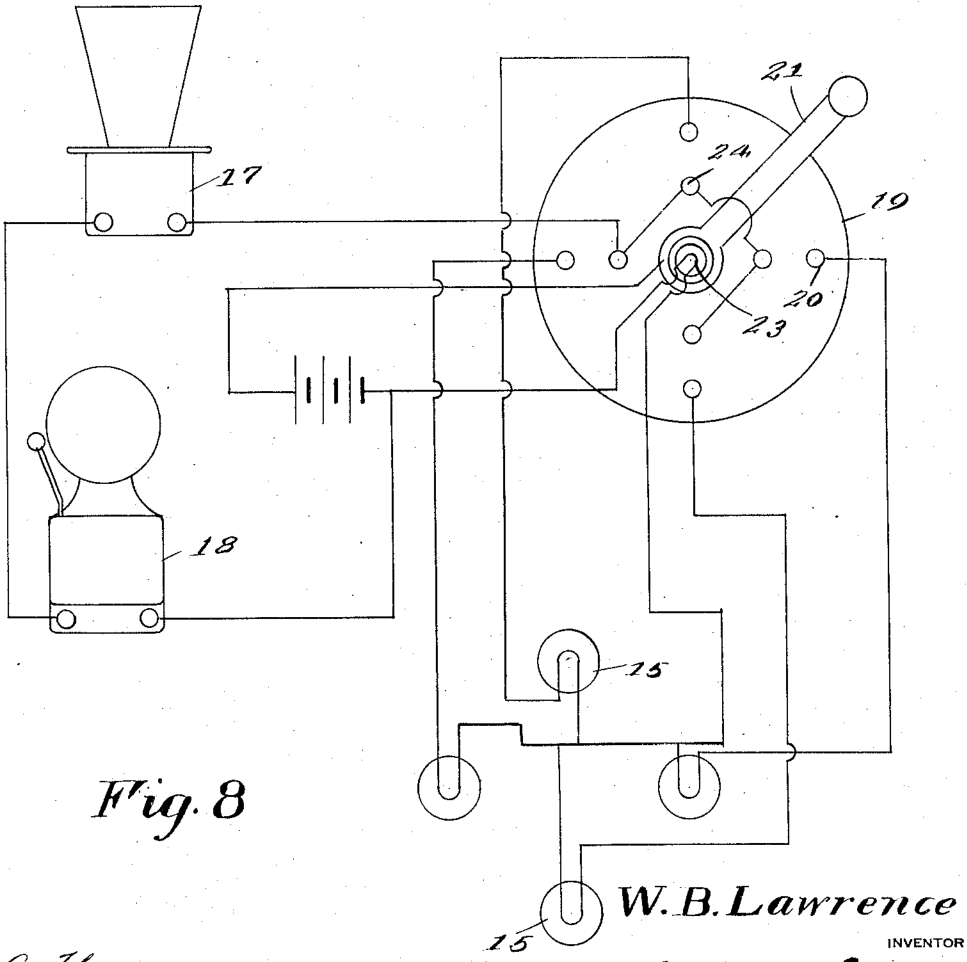


Fig. 8

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Patented Nov. 20, 1923. **1,474,936**

UNITED STATES PATENT OFFICE.

WILLIAM BRADFORD LAWRENCE, OF SUFFOLK, VIRGINIA.

DIRECTIONAL SIGNAL.

Application filed March 8, 1920. Serial No. 364,121.

To all whom it may concern:

Be it known that I, WILLIAM B. LAWRENCE, a citizen of the United States, residing at Suffolk, in the county of Nansemond and State of Virginia, have invented new and useful Improvements in Directional Signals, of which the following is a specification.

This invention relates to directional signals for automobiles and other vehicles and the principal object of the invention is to provide a plurality of signs with means for illuminating them to indicate when the vehicle is to stop, back, turn to the right or to the left.

Another object of the invention is to provide means for sounding an alarm at the same time the sign is illuminated.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a view showing the invention applied to an automobile.

Figure 2 is a front view of the casing containing the signal parts.

Figure 3 is a sectional view through this casing.

Figure 4 is a vertical sectional view through the casing.

Figure 5 is a fragmentary detail view of the means for holding the glass plate in position.

Figure 6 is a face view of the switch means.

Figure 7 is a sectional view of such means.

Figure 8 is a diagrammatic view of the circuits.

In these views 1 indicates a casing which is adapted to be connected in any suitable manner to the rear part of the automobile. In Figure 1 it is shown as connected with the rear part of one of the fenders by the supporting bracket 2. This casing is formed with a cylindrical front part 3 and a frusto-conical rear part 4, a circular opening 5 being formed through the center of said casing. The front part of the casing is provided with a cover 6, the outer flange of which overlaps the cylindrical part of the casing and is secured thereto by the screws 7. This cover is provided with an inner flange 8 which projects into the opening 5. This cover is provided with four arc-shaped openings 9 which are covered by the transparent plates 10, said plates being held in position by the ring member 11, which is soldered to the inner face of the outer flange of the cover and is provided with bent over portions 12 which engage the plates for holding them against the inner face of the cover. The upper plate carries the word "stop," the lower plate the word "back," the plate on the right hand side the word "right" and the plate on the left hand side the word "left." The casing is divided into four chambers by the partitions 13 and these partitions are in alignment with the strips 14, which separate the openings in the cover so that each transparent plate forms a cover for a chamber. Each chamber has located therein an electric lamp 15 and the inner face of the part 4 of the casing is provided with a coating 16 of reflecting material of such a nature that it will reflect the light to be seen from the lamp through the transparent plate in the daytime as well as at night.

A horn or whistle 17 is suitably secured in the opening 5 in the casing and a bell or gong 18 is secured to the rear face of the part 4 of the casing.

A switch block 19 is suitably secured to a part of the automobile within convenient reach of the driver and this block is provided with the four terminals 20 which are in electrical connection with the lamps in the casing. A lever 21, made of resilient material, is rotatably mounted on the block and this lever is so formed that it will normally be out of engagement with the contacts. This lever is electrically connected with the battery or other suitable source of electrical supply of the automobile by means of the terminal 22 having its end engaged by the ring-shaped part 21′ of the lever which is rotatably connected with the block. By this arrangement the lever is always in electrical contact with the terminal. I also provide a tell-tale light 23 on the switch block and locate this lamp in the return line of the lamps in the casing so that this lamp will be lighted at any time that the lamps in the casing are lighted and thus indicate whether or not the lamps in the casing are in proper working order. I also provide the contacts 24 in the switch block and connect these contacts with the horn 17 and bell 18 so that both the horn and bell will be sounded when the lever 21 is placed in engagement with the said contacts 24. I arrange each of these contacts 24 in line with one of the contacts 20 so that the circuits to the lamps and the bell and horn may be closed at the same time if desired. The contacts 24 are located nearer the center of the block than the contacts 20 so that the lever can be pushed into engagement with said contacts 24 to sound an alarm without being placed in engagement with the contacts 20 so that the alarm can be sounded without lighting the lamps in the casing.

I prefer to arrange the parts on the switch block as shown in Figure 7. In this figure the lamp 23 is carried by a socket member 25, formed of insulating material and having its lower end engaging a recess formed in the block. This member is also provided with an outer flange for engaging the ring part 21′ of the lever. A sleeve 26, formed of insulating material, surrounds the member 25 and rests upon the block and acts as a support for the ring member 21′. This sleeve is held to the block by the terminal 22 and the member 25 is held in position by the terminal 27 which receives the conductor which connects the tell-tale to the lamps in the casing. A terminal 28 is arranged in the side of the member 25. for engaging with the tell-tale lamp, and this terminal receives the conductor which passes from the lamp to one of the terminals of the battery.

I provide a pair of clips 29 on the switch block and these clips are adapted to hold the lever in engagement with the contacts for illuminating the stop sign and the back sign so that the lamps of these signs may be kept burning as long as desired. It is not necessary to hold the lever in contact with the terminals for the right and left signs as it is only necessary to light these lamps just before the turn is made. I prefer to form arrows 30 on the cover member opposite the right and left signs.

It will thus be seen that the driver of the automobile by manipulating the lever 21 may clearly indicate to the automobiles in his rear his intentions to stop, back, turn to the right or turn to the left and by sounding an alarm the attention of the drivers of the automobiles will be called to the signs. The device may be placed on either the front or back of the car.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

A direction signal of the character described comprising a casing having a circular opening centrally formed therethrough and including a cylindrical front part, a frusto-conical rear part having its diverging walls terminating with the inner end wall of the circular opening, a cover for the casing and being provided with arc shaped openings and a central circular opening adapted to register with the opening in the casing, an outer flange formed on the cover and being secured to the outer wall of the cylindrical part, an inner flange formed on the cover and being secured to the walls of the opening in the casing, transparent plates secured in the respective arc shaped openings and carrying the legends stop, back, right, and left, respectively, means for illuminating the plates, partitions arranged in the casing for separating the illuminating means and a sounding signal arranged through the opening in the casing to be sounded previous to illuminating any of the plates.

In testimony whereof I affix my signature.

WILLIAM BRADFORD LAWRENCE.